Heading: Not 'If' But 'When': Terrorist Drone Attacks

Drones were novel and rare ten years ago, but now – thanks to leaps forward in technology – drones are cheap and easy to acquire for anyone. The militaries of 86 countries have some drone capability and at least seven countries have used drones in combat. In 2015, experts estimated that drone production would total $93 billion over the next ten years, more than tripling the current market value.

But it's not just militaries that are considering the weaponized use of drones in combat. Drones are finding much more traction from terrorist groups due to the facts they're cheap, easy to acquire, and highly portable. Drones offer a distinct tactical advantage for armed militant groups looking to implement asymmetric warfare.

In short, drones are a game-changer.

Chris Abbott, research fellow at Bradford University's School of Social and International Studies said, "The use of drones for surveillance and attack is no longer the purview of state militaries alone. A range of terrorist, insurgent, criminal, corporate, and activist groups have already shown their desire and ability to use drones … The government needs to take this threat seriously."

We have already seen an elementary use of drones by armed groups on a range of applications from filming propaganda videos by the Islamic State militant group (ISIS) to scouting enemy positions to now targeting artillery and mortar fire in Iraq, Syria, Gaza, and the Ukraine.

This is not a new threat.

Hezbollah, the Lebanese militant group, has repeatedly attempted to attack Israel using commercially-available drones modified to carry explosives and has an estimated fleet of over 200 drones. There have also been similar reports of ISIS and Jabat Al Nusra trying the same in Iraq and Syria.

For now, terrorist groups' drone technology has not been very effective against military bases because the drones are slow, easy to shoot down, and can only carry a limited amount of cargo. These drones could, however, be very effective when turned against the general public and experts warn that it's only a matter of time until ISIS and other terrorist organizations use drones to attack the U.S. or Europe.

Terrorist Applications for Drones

- **Battlefield Deployment**
    - A report indicates that ISIS is in the process of developing its own drone fleet.
- **Swarming**

    - Swarming involves a large amount of drones simultaneously attacking a military or civilian target from number of directions, carrying an explosive charge or similar. At a basic level, this can utilise same feature as makes drone to follow and film you while you ski or bike down a mountain.
    - This is a key threat, now taken very seriously by a number of government agencies, including a recent tender by DARPA inviting defence industry to submit anti-swarming solutions. Of course, DARPA is researching swarming offensives at the same time.
- **Bomb Delivery System**
    - Targeting a stadium, concert venue, or other gathering place for a large number of people is highly likely but also so is targeting government buildings, nuclear power plants, dams, and foreign embassies.
- **Chemical Warfare**
    - Adapting crop-spraying drones to deploy a biological agent. It's not a new idea and unlikely to be lethal on a large scale, but it could have a negative psychological effort on the civilian population regardless. The recent discovery of an ISIS "drone factory" in Mosgul indicates potential "dirty bomb" drone deployments in Europe in the near future.
- **Sabotage**
    - This could include deliberately flying a drone into an aircraft's engine to cause catastrophic engine failure.
- **Spreading Propaganda**
    - We have already seen this from both ISIS and the Taliban with drone-shot videos of skirmishes intended to promote their cause.

Drones Are Here to Stay

It isn't possible to turn back the clock on drone technology. Drones are here to stay. It's well documented that drones are a threat to national and world security when they fall into the wrong hands. It's now time to turn the conversation to how to prevent these types of attacks.

While the technology of remote-controlled warfare is impossible to completely control, there are countermeasures that governments, militaries, and police around the world can take to minimize the opportunities that terrorists have to deploy weaponized commercially-available drones.

Currently, drones range from small toy drones up to large military models and their uses range from aerial filmography, industrial applications, journalism, and more. Just like any new technology that is released into the open market, there is a period of growing pains where regulations need to be put in place to prevent accidents and reduce criminal use.

The Federal Aviation Administration (FAA) in the U.S. has been slow to implement drone regulations as have other governments around the world including the U.K. and Australia where the Civil Aviation Safety Authority (CASA) new rules only took effect in September.

The first step is likely a registry program and licenses, but that won't stop terrorists from buying drones in other countries and importing them. Otherwise, there's a need for countermeasure technologies to protect key areas like airports, embassies, power plants, and others. There are already a few technologies like this out there like DroneShield's DroneGun as well as capturing them with nets, and even trained eagles.

One thing is clear – protection from drones will become imperative in the next few years.